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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,567

03/27/2006

Satoshi Hashimoto

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EXAMINER

CHRISS, JENNIFER A

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

05/14/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/573,567

Applicant(s)

HASHIMOTO ET AL.

Examiner

JENNIFER A. CHRISS

Art Unit

1794

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-11 is/are pending in the application.
- 4a) Of the above claim(s) 6-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-85/86)
- Paper No(s)/Mail Date 03/17/2009
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's Amendments and Accompanying Remarks filed on March 17, 2009 has been entered and carefully considered. Claim 1 is amended, claim 3 is cancelled, claims 6 - 9 are withdrawn and claims 1 - 2 and 4 - 11 are pending. The invention as currently claimed is not found to be patentable for reasons herein below.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102/103

3. Claims 1 – 2, 4 - 5 and 10 remain rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sato et al. (US 2003/0004292 A1). The rejection is maintained.

Sato et al. is directed to a vinylidene fluoride resin monofilament for use as a fishing line (Title and page 1, [0002]).

As to claims 1 and 3, Sato et al. teach in Comparative Example 6 a monofilament with sheath-core construction of respective vinylidene fluoride resins of inherent

viscosity of 1.3 and 1.55 (page 4, [0053]); the core having an inherent viscosity of 1.55 dl/g is equated to Applicant's "a vinylidene fluoride resin having an inherent viscosity of at least 1.40 dl/g". Sato et al. teach that the resulting monofilament has a knot strength of 66.3 kg/mm² (page 5, Table 1) which is equivalent to 650.2 MPa.

As to claim 4, Sato et al. teach in Comparative Example 6 that the knot elongation is 19% (page 5, Table 1), which lies in Applicant's claimed range.

As to claim 5, Sato et al. teach that the diameter is in the range of 52 - 1.81 mm (page 2, [0031]).

As to claim 10, Sato et al. teach that the monofilament is used as a fishing line (page 1, [0002]).

As to claims 1 – 2 and 4, Sato et al. teach the claimed invention above but fails to teach a twist index of at least 0.90, a twist index of at least 0.92 and a Young's modulus of 1500 - 3500 MPa. It is reasonable to presume the discussed properties are inherent to Sato et al. Support for said presumption is found in the use of like materials (i.e. a vinylidene fluoride monofilament having an inherent viscosity of 1.55 dl/g and a knot strength of 650.2 MPa) which would result in the claimed properties. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties would obviously have been present once the Sato et al. product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

4. Claims 1 – 2, 4 and 10 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hashimoto et al. (WO 02/064867).

Hashimoto et al. is directed to a vinylidene fluoride composition and monofilament for use as fishing line ([0001] of Translation).

As to claims 1 – 2 and 4, Hashimoto et al. teach in Example 9 a resin composition comprising a blend of (3) homopolymer C and (5) copolymer a in a mass ratio of $(3)/(5) = 2/1$ used as a core material and a blend of (1) homopolymer A and (8) KYNAR 460 in a mass ratio of $(1)/(8) = 3/2$ used as the sheath material ([0087 - 0088] of Translation). According to Table 1, the inherent viscosities of those components are as follows: (1) homopolymer A = 1.1 dl/g, (3) homopolymer C = 1.5 dl/g, (5) copolymer a = 1.45 dl/g and (8) KYNAR 460 = 0.84 dl/g. Using a weighed average, the inherent viscosity of the core is approximately 1.48 dl/g and the inherent viscosity of the sheath is approximately 1.00 dl/g. As required by Applicant, one of the vinylidene fluoride resins is at least 1.40 dl/g and the core has a higher inherent viscosity than the sheath. According to Tables 2 and 3 ([0095 of the Translation), the filament of Example 9 has a knot strength of 753 MPa, a knot elongation of 20.5%, a bend elastic constant of 1.86 GPa (1860 MPa) and a line kink index of 0.92. It should be noted that the knot strength is equated to Applicant's "knot strength" and the knot elongation is equated to Applicant's "knot elongation".

As to claim 10, Hashimoto et al. teach the use of the filament as fishing line ([0001] of Translation).

As to claims 1 – 2 and 4, Hashimoto et al. teach the claimed invention above but fails to teach a twist index of at least 0.90, a twist index of at least 0.92 and a Young's modulus of 1500 - 3500 MPa. It is reasonable to presume the discussed properties are inherent to Hashimoto et al. Support for said presumption is found in the use of like materials (i.e. a vinylidene fluoride filament having a sheath and core, where the sheath has a lower inherent viscosity and one of the vinylidene fluoride resins has an inherent viscosity of at least 1.40 dl/g, a knot strength of 753 MPa and a knot elongation of 20.5%) which would result in the claimed properties. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties would obviously have been present once the Hashimoto et al. product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

Claim Rejections - 35 USC § 103

5. Claim 11 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (US 2003/0004292 A1) in view of Boese (US 3,903,635). The rejection is maintained.

Sato et al. teach that the filament can be used as a fishing line but does not specifically indicate that the fishing line is in a form of being wound around a spool.

Boese is directed to a convertible fishing reel (Title). Boese discusses a typical fishing rod assembly having a rod with a handle portion and the fishing reel is provided with a line spool for storage of a desired length of fishing line which comes off the spool

and is directed through an eyelet. The fishing reel is provided with a crank handle to effect manual rotation of the line spool for the purpose of reeling the line in or out (column 2, lines 1 - 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the fishing line of Sato et al. on a spool as suggested by Boese motivated by the desire to control the length of the line and to store the remaining portion of fishing line while fishing.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto et al. (WO 02/064867) in view of Boese (US 3,903,635).

Hashimoto et al. teach that the filament can be used as a fishing line but does not specifically indicate that the fishing line is in a form of being wound around a spool.

Boese is directed to a convertible fishing reel (Title). Boese discusses a typical fishing rod assembly having a rod with a handle portion and the fishing reel is provided with a line spool for storage of a desired length of fishing line which comes off the spool and is directed through an eyelet. The fishing reel is provided with a crank handle to effect manual rotation of the line spool for the purpose of reeling the line in or out (column 2, lines 1 - 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the fishing line of Hashimoto et al. on a spool as suggested by Boese motivated by the desire to control the length of the line and to store the remaining portion of fishing line while fishing.

Response to Arguments

7. Applicant's arguments filed March 17, 2009 have been fully considered but they are not persuasive.
8. Applicant argues that Comparative Example 6 of Sato et al. which relied upon by the Examiner fails to satisfy a twist index of at least 0.90 after standing for 3 hours. Applicant provides a table which summarizes Comparative Example 6 of Sato et al. and Comparative Example 2 of the present application. Applicant indicates that Comparative Example 6 of Sato et al. and Comparative Example 2 of the present application are very close to each other except that the heat treatment in the latter was not performed in the former. The Examiner disagrees that Comparative Example 2 indicates that the Comparative Example 6 of Sato et al. does not have a twist index of at least 0.90. The fiber, specifically the inherent viscosity of the core of the two examples are different, the parameters of the first stretching (different in times and temperature) and the second stretching (difference in temperature) are different as well as the use of heat treatment in the Comparative Example of the present application and no heat treatment in Comparative Example 6 of Sato et al. Although they could potentially be considered "close", due to the only small difference of the twist index in Comparative Example 2 of the present Application which is 0.87 and the claimed 0.90 and above, the Examiner submits that an experiment done according to the parameters of Comparative Example 6 of Sato et al. are essential to accurately determine the actual twist index to compare to the claimed twist index.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER A. CHRISS whose telephone number is (571)272-7783. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 6 p.m., first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jennifer A Chriss/
Primary Examiner, Art Unit 1794

/J. A. C./
Primary Examiner, Art Unit 1794